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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

ML

Office Action Summary	**Application No.** 10/681,279	**Applicant(s)** SCHMITZ ET AL.	
	Examiner Christopher P Bruenjes	**Art Unit** 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) *34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33,35 and 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/024,386.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 20031009, 20040102, 20050103

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-33 in the reply filed on February 10, 2005 is acknowledged. The traversal is on the ground(s) that Groups I and II are not patentably distinct. This is not found persuasive because it has been shown in the previous office action that the article can be made by another and materially different method. Specifically, it was shown that the composite product claimed could be made by lamination, which is a process of bonding two separately formed layers together typically through adhesive. The Markush group of methods presented in claim 34 all include a method in which the layers are formed simultaneously and not two separately fully finished layers that are bonded together as described in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 34 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the

reply filed on February 10, 2005. As requested by the Applicant if the product claims are found allowable the withdrawn process claim would be subject to rejoinder, since it is dependent on the product claim.

3. The restriction requirement of record required between the first and third groups have been withdrawn due to Applicant's traversal in the Paper filed February 10, 2005. Therefore, claims 1-33 and 35-36 will be considered and only claim 34 will be withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-7, 9-14, 20, 24, 29, and 35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,677,015. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '015 teach a layered composite (col.8, l.35-36). The first layer comprises at least 50% by weight of a polyamine-polyamide copolymer comprising from 0.05 to 2.5% by weight of a polyamine having at least 4 nitrogen atoms and a polyamide-forming monomer selected from the group consisting of lactam, ω-aminocarboxylic acid, an equimolar combination of a diamine and a dicarboxylic acid, and mixtures thereof (claim 1). The polyamine-polyamide copolymer having the properties claimed in claim 1 of the '015 reference inherently has a number-average molar mass of at least 146g/mol, at least 500g/mol, or at least 800g/mol, as shown in the specification in column 3. The polyamide portion of the polyamine-polyamide copolymer would have at least 20 parts by weight of monomer units selected from the groups claimed in claim 1 of the instant invention. Because the claims teach at least 50% of the polyamine-polyamide copolymer, which represents (b) of the instant claims, the claims teach the limitations of claims 2-7. The at least 4 nitrogen atoms claimed is further defined in the specification

to define at least 8 or at least 11 atoms. The composite comprises at least one regrind layer (claim 12), and/or at least one electrically conductive layer (claim 11). The composite is a blow-molded, which is a hollow article (claim 8). The claims of '015 teach that the composite includes a fuel-component-barrier layer, but fails to explicitly teach within the claims what is considered a fuel-component-barrier layer. However, claims are read in light of the specification and the specification of '015 defines a fuel-component-barrier layer as including an EVOH layer. Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to that the composite taught in the claims of '015 would obviously include an EVOH layer, as taught by the claims in light of the specification of '015.

5. Claims 35-36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,783,821. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '821, and specifically claim 1 and 13 teach a molding composition making up one of the two or more layers of the composite comprising all of the limitations of claims 35 and 36 of the

instant application. Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made that the molding composition of the first layer of the composite of the claims of '821 obviously teaches all of the limitations of claims 35 and 36, since the claims of '821 teach a species within the broad scope of claims 35 and 36.

6. Claims 1-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,783,821 in view of Merziger (USPN 6,302,153).

The claims of '821 teach a composite having two or more layers and comprising a layer I obtained from a molding composition comprising the same composition as taught in instant claims 1-16 (as described in claims 1-13 of '821). The composite further comprises a layer selected form polyamide 11, polyamide 12, polyamide 612, polyamide 1012, polyamide 1212, and mixtures thereof, which can be an outer layer (claim 21), and/or a layer selected from the group consisting of polyamide 6, polyamide 66, polyamide 6/66, and mixtures thereof (claims 14-15). The composite further contains two of the layer I (claim 18). The composite further contains a regrind layer (claim 19). The composite is formed in multiple sequences of layers (claims

16-18). The composite further contains an electrically conductive layer (claim 22). The composite is in the form of a tube, has a corrugated shape, is in the form of a hollow article, or in the form of a film (claims 24-26 and 30). The composite further contains an elastomer layer adjacent to the outermost layer (claim 27). The composite is fuel piping, brake-fluid piping, coolant piping, hydraulic-fluid piping fuel-pump piping, air-conditioner piping, or a vapor line (claim 28). The composite is also a container or filler pipe (claim 29).

The claims of '821 fail to teach that the composite comprises a layer composition comprising at least one ethylene-vinyl alcohol copolymer. However, Merziger teaches that an EVOH layer is added to a tube formed of polyamides used to convey petrol, such as the tube of the claims of '821, in order to provide the tube with a lower permeability to hydrocarbons and their additives (col.1, l.15-20 and col.2, l.43-47). Merziger also teaches that tubes used in conveying petrol, such as the tubes of the claims of '821, are required to lower permeability to hydrocarbons for safety and environmental protection reasons (col.1, l.21-26). One of ordinary skill in the art would have recognized that the composite forming tubing of the claims of '821 and the tubing of Merziger are analogous insofar as both are related to polyamide based tubes used in conveying petrol and hydrocarbons, especially in motor vehicles.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to add an EVOH layer to the composite of the claims of '821 in order to lower permeability of the composite to hydrocarbons for safety and environmental protection reasons, as taught by Merziger.

7. Claims 1-15, 17-19, 23-33 and 35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6,355,358 in view of Hudak (6,177,516). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of Patent No. 6,355,358 teach the composition of the polyamine-polyamide copolymer of the instant invention and multiple layers in which one is a fuel-component-barrier layer, and another layer is an electrically conductive layer in the application in claims 1-15 of the patent. The claims are defined by the specification and therefore Boer et al also teach a layered composite comprising at least two layers. The first layer comprises from 5 to 60 parts by weight of a graft copolymer prepared using the

following monomer units: from 0.5 to 25% by weight, based on the graft polymer of a polyamine having at least 11 nitrogen atoms and having a number average molecular weight of at least 800g/mol and polyamide-forming monomers selected from lactams, ω-aminocarboxylic acids and/or equimolar combination of diamine and dicarboxylic acid, and from 10 to 85 parts by weight of another polyamide, which must be similar to the polyamides formed in the graft copolymer, which includes PA6, PA66, PA6/66, PA11, PA12, PA612, PA1012, PA1212 and mixtures thereof (col.8, l.7-37). The amino group concentration of the graft copolymer is in the range from 150 to 1500mmol/kg (col.4, l.46-48). There is another layer comprising one selected from PA11, PA12, PA612, PA1012, PA1212 and combination thereof or PA6, PA66, PA6/66 and combinations thereof (col.6, l.5-15). Boer et al also teach a composite having a layer structure of layer I, which is a polyamide listed above, next to an adhesion promoter, which is the composition of the invention, next to layer II, which is a fuel barrier layer, such as polyester, next to the adhesion promoter, next to layer I, which is a different polyamide from the first layer I (col.9, l.45-50). Also one of the layers is an electrically conductive layer (col.9, l.5-10). The multilayer composite is formed into a pipe, a filer neck or a tank for transport or storage of liquids or gases. A pipe has a corrugated shape. The articles formed by the composition includes fuel lines, tank filler necks, vapor lines, gasoline pump hoses and piping, cooling fluid lines, air-conditioning unit lines or fuel tanks (col.8, l.57-67). The multilayer composite is also in the form of a film (col.9, l.1-5). The composite is also sheathed with an additional elastomer layer (col.9, l.24-25). The articles are prepared by multicomponent injection molding methods, coextrusion methods or coextrusion blow molding methods. Boer et al teach polyester as the fuel-barrier layer and fail to explicitly teach ethylene vinyl alcohol. However, it is well known by one of ordinary skill in the art that ethylene vinyl alcohol and polyester are both fuel-barrier layers used in fuel containing articles of motor vehicles, as taught by Hudak (col.8, lines 43-49), and determining which fuel-barrier layer to use is determined through routine experimentation depending on the intended results of the article.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to substitute ethylene vinyl alcohol for polyester as the fuel-barrier layer of Boer et al, because ethylene vinyl alcohol and polyester are well known in the art to be interchangeable, as taught by Hudak, and it is obvious to one having ordinary skill in the art to select a known material on the basis of its suitability for the intended use, absent the showing of unexpected result.

Specification

8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

9. The abstract of the disclosure is objected to because the abstract must be limited to one paragraph and be in narrative form. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-19, 21, 23-33, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitchell et al (USPN 5,460,771).

Mitchell et al teach a layered composite comprising a first layer comprising PA6, PA11, PA12 or mixtures thereof (col.6, l.22-26), which depending on the percentage of each polyamide in the mixture and the percentage of additives specified comprises a composition of layer I comprising polyamide (a) or (c) or the combination of the two having at least 30 parts and not more than 60 parts of each and not more than 40 parts of polyamide (b). Note that because the claims 9-15 are dependent on claim 1 and claim 1 defines polyamide (b) with a concentration of 0 to 100 parts, the limitations on polyamide (b) are met when polyamide (b) is not present in the composition of layer I. A second "chemically similar" inner layer comprises PA12, PA11, or PA6 (col.8, l.2-13). Regarding claim 16 and 36, the PA6, PA11, PA12, and mixtures thereof are block polyamides and therefore, whichever polyamides are chosen they will have at least one block copolymer comprising (a) and (c) monomer units. The intermediate bonding layer is comprised of ethylene vinyl alcohol (col.11, l.3-10). The intermediate bonding layer may exhibit electrically conductive properties (col.11, l.32-44). The composite is in the form of a corrugated hollow tube (see abstract). The corrugated hollow tube is used as a fuel pipe or filler pipe (col.1, l.10-20). By forming the pipes by coextrusion the composite is a film.

11. Claim 36 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishida et al (USPN 5,292,789).

Ishida et al anticipate a molding composition comprising 11 to 29 parts by weight of polyamide (col.2, l.1-25). The polyamide is defined as a block copolymer of nylon-6 and nylon-12, which is a copolymer prepared form epsilon-caprolactum with omega-laurolactum or 12-aminododecanoic acid (col.4, l.15-21). The copolymerization ratio is between 0.02 and 50 moles of nylon-12 per mole of nylon 6 (col.4, l.21-23). Therefore, the entirety of (a) and (b) would include at least 20 parts by weight of caprolactum and the entirety of (b) and (c) would include at least 20 parts by weight of laurolactum or 12-

aminododecanoic acid. The claim is anticipated because the claim does not require any of the component (b).

12. Claims 1-7, 9-14, 20, 24, 29, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Himmelmann et al (USPN 6,677,015).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Himmelmann et al anticipate a composite comprising a first layer comprising at least 50% by weight of a polyamine-polyamide copolymer comprising from 0.05 to 2.5% by weight of a polyamine having at least 4 nitrogen atoms and a polyamide-forming monomer selected from the group consisting of lactam, ω-aminocarboxylic acid, an equimolar combination of a diamine and a dicarboxylic acid, and mixtures thereof (claim 1). The polyamine further has at least 8 or at least 11 nitrogen atoms (col.2, l.50-58) and a number-average molecular weight of at least 146g/mol, at least 500g/mol, or at least 800g/mol (col.3, l.25-28). The polyamide portion of the polyamine-polyamide copolymer would have at least 20 parts by weight of monomer units selected from the groups claimed in claim 1 of the instant invention. Because the claims teach at least 50% of the polyamine-polyamide copolymer, which represents (b) of the instant claims, the claims teach the limitations of claims 2-7. The composite comprises at least one regrind layer (claim 12), and/or at least one electrically conductive layer (claim 11). The composite is a blow-molded, which is a hollow article (claim 8). The claims of '015 teach that the composite includes a fuel-component-barrier layer, and teaches that the fuel-component-barrier layer is formed of EVOH (col.6, l.9-12).

13. Claim 35 is rejected under 35 U.S.C. 102(e) as being anticipated by Boer et al (USPN 6,355,358).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Boer et al anticipate a molding composition used as an adhesion promoter comprising from 5 to 60 parts by weight of a polyamine-polyamide graft copolymer comprising from 0.5 to 25% by weight, based on the weight of the copolymer, of at least one polyamine having at least 4 nitrogen atoms and having a number average molecular weight of at least 146g/mol, and at least one polyamide-forming monomer selected from the group consisting of lactams, ω-aminocarboxylic acids, equimolar combination of diamine and dicarboxylic acid, and mixtures thereof (col.14, l.32-43). The adhesion promoter further comprises 10 to 85 parts by weight of a polyamide (col.14, l.44). The polyamide of the adhesion promoter is compatible or the same as the polyamide of the layer the adhesion promoter is adhered to (col.8, l.26-37), and Boer et al teach that the polyamide layer is formed of mixtures of PA6, PA66, PA11, PA12, PA612, PA1012, and/or PA1212 (col.6, l.5-8 and 39-41). Therefore, Boer et al anticipate the limitation that within the entirety of (a) and (b), at least 20 parts by weight of said entirety comprise monomer units selected from the group consisting of caprolactam, combination of hexamethylenediamine/adipic acid, and mixture thereof, and within the entirety of (b) and (c), at least 20 parts by weight of said entirety comprise monomer units selected from the group consisting of ω-aminoundecanoic acid, laurolactam, combination of hexamethylneediamine/1,12-dodecanedioic acid, combination of 1,10-decanediamine/1,12-dodecanedioic acid, combination of 1/12-dodecanediamine/1,12-dodecanedioic acid, and mixtures thereof, because these are monomer units used to form the polyamides listed above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1-19, 21-33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al (USPN 5,460,771) in view of Borggreve et al (USPN 5,859,148).

Mitchell et al teach all that is claimed in claim 1, but fail to explicitly teach the polyamine-polyamide copolymer within the Markush group of claim 1, 35, or 36. However, Borggreve et al teach star-branched polymers consisting of a core compound having at least three functional groups, including dendrimer amine, from which emanate linear polymer chains having at least one hetero atom in the chain, including polyamide. The polyamides may be obtained by polycondensation of diacids and diamines, amino acids, or lactams (col.2, l.27-33). The dendrimer amines may have at least 11 nitrogen atoms and a number average molecular weight of at least 500g/mol, as is immediately envisaged from the formula set forth at column 3. In example II, nylon 66 is reacted with a dendrimer amine. Borggreve et al also teach that star-branched polymers have a viscosity many times lower than that of the non-branched polymer having a corresponding total molecular weight, therefore making the star-branched polyamine-polyamide copolymer easier to extrude than the corresponding polyamide homopolymers (col.3, l.54-62). One of ordinary skill in the art would have recognized that a star-branched polyamine-polyamide copolymer would be added to a polyamide composition in order to lower the intrinsic viscosity so that extruding the composition is easier, as taught by Borggreve et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to add the star-branched polyamine-polyamide copolymer of Borggreve et al to the polyamide composition of Mitchell et al in order to improve the extrudability of the composition, as taught by Borggreve et al.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al (USPN 5,460,771) in view of Borggreve et al (USPN 5,859,148) as applied to claim 1 above, and further in view of Hata et al (USPN 6,033,749).

Mitchell et al alone or in combination with Borggreve et al teach all that is claimed in claim 1, but fails to explicitly teach a regrind layer. However, Hata et al teach that it is well known in the art of manufacturing fuel tanks to use scraps resulting from molding or recovered from consumers alone or in combination with virgin materials to form layers, because recycling of the scrap material is desirable for environmental protection and cost reduction. One of ordinary skill in the art would have realized that adding a regrind layer either alone or in combination with virgin material is added to an article when forming fuel components or tanks for environmental protection or cost reduction, as taught by Hata et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to add a regrind as a separate layer or component of a blend to the article in order to protect the environment or reduce cost, as taught by Hata et al.

16. Claims 1-15, 17-19, and 21-33 are rejected under 35 U.S.C. 103(a) as being obvious over Boer et al (USPN 6,355,358) in view of Hudak (USPN 6,177,516).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Boer et al teach a layered composite comprising at least two layers. The first layer comprises from 5 to 60 parts by weight of a graft copolymer prepared using the following monomer units: from 0.5 to 25% by weight, based on the graft polymer of a polyamine having at least 11 nitrogen atoms and having a number average molecular weight of at least 800g/mol and polyamide-forming monomers selected from lactams, ω-aminocarboxylic acids and/or equimolar combination of diamine and dicarboxylic acid, and from 10 to 85 parts by weight of another polyamide, which must be similar to the polyamides formed in the graft copolymer, which includes PA6, PA66, PA6/66, PA11, PA12, PA612, PA1012, PA1212 and mixtures thereof (col.8, l.7-37). The amino group concentration of the graft copolymer is in the range from 150 to 1500mmol/kg (col.4, l.46-48). There is another layer comprising one selected from PA11, PA12, PA612, PA1012, PA1212 and combination thereof or PA6, PA66, PA6/66 and combinations thereof (col.6, l.5-15). Boer et al also teach a composite having a layer structure of layer I, which is a polyamide listed above, next to an adhesion promoter, which is the composition of the invention, next to layer II, which is a fuel barrier layer, such as polyester, next to the adhesion promoter, next to layer I, which is a different polyamide from the first layer I (col.9, l.45-50). Also one of the layers is an electrically conductive layer (col.9, l.5-10). The multilayer composite is formed into a pipe, a filer neck or a tank for transport or storage of liquids or gases. A pipe has a corrugated shape. The articles formed by the composition includes fuel lines, tank filler necks, vapor lines, gasoline pump hoses and piping, cooling fluid lines, air-conditioning unit lines or fuel tanks (col.8, l.57-67). The multilayer composite is also in the form of a film (col.9, l.1-5). The composite is also sheathed with an additional elastomer layer (col.9, l.24-25). The articles are prepared by multicomponent injection molding methods, coextrusion methods or coextrusion blow molding methods. Boer et al teach polyester as the fuel-barrier layer and fail to explicitly teach ethylene vinyl alcohol. However, it is well known by one of ordinary skill in the art that ethylene vinyl alcohol and polyester are both fuel-barrier layers used in fuel containing articles of motor vehicles, as taught by Hudak (col.8, lines 43-49), and determining which fuel-barrier layer to use is determined through routine experimentation depending on the intended results of the article.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to substitute ethylene vinyl alcohol for polyester as the fuel-barrier layer of Boer et al, because ethylene vinyl alcohol and polyester are well known in the art to be interchangeable, as taught by Hudak, and it is obvious to one having ordinary skill in the art to select a known material on the basis of its suitability for the intended use, absent the showing of unexpected result.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aharoni (USPN 5,326,830) and O'Neil et al (USPN 5,998,551).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 11, 2005

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1772

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